	Application No.	Applicant(s)
Notice of Allowability	09/824,003	MILNER, ROY M.
	Examiner	Art Unit	
	Michael B. Holmes	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *May 09, 2005.*

2. ☒ The allowed claim(s) is/are *9-46.*

3. ☒ The drawings filed on *02 April 2001* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some*   c)☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a)☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1)☐ hereto or 2)☐ to Paper No./Mail Date _____ .

    (b)☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

        Paper No./Mail Date _____ .

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☐ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

UNITED STATES PATENT AND TRADEMARK OFFICE

P.O. Box 1450, Alexandria, Virginia 22313-1450 – WWW.USPTO.GOV

Examiner's Detailed Office Action

1.   Claims 1-8 have been canceled.

2.   Claims 9-46 are allowed.

REASONS FOR ALLOWANCE

3.   The following is an Examiner's statement for reasons for allowance:

4.   The closest prior art *Virgil et al.* (USPN 5,493,679), *Ponamgi et al.*, "Incremental Algorithms for Collision Detection Between Solid Models", Proceedings of the 3rd ACM Symposium on Solid Modeling and Application, 1995, *Li et al.*, "Incremental 3D Collision Detection with Hierarchical Data Structures", Proceedings of the ACM Symposium on Virtual Reality Software and Technology, 1998, *Yang et al.*, "An Intelligent Symbol Usage Assistant for CAD Systems", IEEE Expert, June 1994, Vol. 9, Issue 3, and *Hamdi-cherif, A.*, "The CASCIDA Project: A Computer-Aided System Control for Interactive Design and Analysis", 1994 does not teach or render obvious applicant's claimed invention. In particular, as pointed out below, the prior art lacks certain features and the combination as specified in the respective claims.

5.   With regards to claim 9 *Virgil et al.*, *Ponamgi et al.*, *Li et al.*, *Yang et al.*, and *Hamdi-cherif, A.*, does not disclose creating a coordinate file for each new item in a drawing based on

the coordinate code for the item. Checking the coordinate file for each new item to determine if the coordinate file already exists and if so, determining if there is a collision between the new item and existing items in the coordinate tile based on the edge identifying data and adding the new item to the coordinate file, and providing an indication of a collision if the edge identifying data indicates that two items occupy the same location within a grid element.

6.   With regards to claim 28 *Virgil et al.*, *Ponamgi et al.*, *Li et al.*, *Yang et al.*, and *Hamdi-cherif, A.*, does not disclose creating a coordinate file for each new item in a drawing based on the coordinate code for the item. Checking the coordinate tile for each new item to determine if the coordinate file already exists and if so, determining if there is a collision between the new item and existing items in the coordinate file based on the edge identifying data and adding the new item to the coordinate file, and providing an indication of a collision if the edge identifying data indicates that two items occupy the same location within a grid element.

Correspondence Information

7.   Any inquires concerning this communication or earlier communications from the examiner should be directed to Michael B. Holmes, who may be reached Monday through Friday, between 8:00 a.m. and 5:00 p.m. EST. or via telephone at (571) 272-3686 or facsimile transmission (571) 273-3686 or email Michael.holmesb@uspto.gov.

If you need to send an Official facsimile transmission, please send it to (571) 273-8300.

If attempts to reach the examiner are unsuccessful the Examiner's Supervisor, Anthony Knight, may be reached at (571) 272-3687.

Hand-delivered responses should be delivered to the Receptionist @ (Customer Service

Window Randolph Building 401 Dulany Street Alexandria, VA 22313), located on the first floor

of the south side of the Randolph Building.

Michael B. Holmes
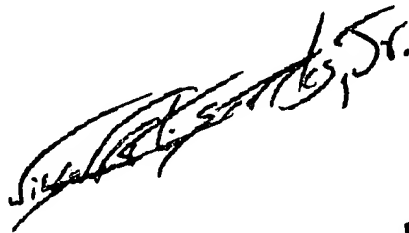Patent Examiner
Artificial Intelligence
Art Unit 2121
United States Department of Commerce
Patent & Trademark Office

Wednesday, August 03, 2005

MBH

Wilbert L. Starks, Jr.
Primary Examiner
Art Unit - 2121